

1. (Previously Amended) A method of controlling drag and vortex induced vibration in a substantially cylindrical element consisting of providing an ultra-smooth surface about the cylindrical element having a K/D ratio of 1.0×10^{-4} or less where:

K is an average measure surface peak to through distance and

D is an effective outside diameter of the cylindrical element.

2. (Previously Amended) A method of controlling drag and vortex induced vibration about a substantially cylindrical marine element consisting of an ultra-smooth surface coating about the cylindrical element having a K/D ratio of 1.0×10^{-4} or less where:

K is an average measured surface peak to trough peak distance; and

D is an effective outside diameter of the cylindrical element including the coating.

3. (Previously Amended) A method of controlling drag and vortex induced vibration about a substantially cylindrical marine element consisting of an ultra-smooth surface on a substantially cylindrical sleeve about the cylindrical element having a K/D ratio of 1.0×10^{-4} or less where:

K is an average measured surface peak to trough peak distance; and

D is an effective outside diameter of the cylindrical element, including the sleeve.

4. (Previously Amended) A system for controlling drag and vortex induced vibration, consisting of:

a substantially cylindrical marine element have an ultra-smooth effective surface with a K/D roughness parameter of about 1.0×10^{-4} or less, where:

K is an average measured surface peak to trough peak distance; and

D is an effective outside diameter of the cylindrical element, including the sleeve.

5. (Previously Amended) A system for controlling drag and vortex induced vibration consisting of a substantially cylindrical marine element having an ultra-smooth coating material with a K/D roughness parameter of 1.0×10^{-4} or less where:

K is an average measured surface peak to trough peak distance; and

D is an effective outside diameter of the cylindrical element including the coating.

6. (Previously Amended) A system for controlling drag and vortex induced vibration consisting of a substantially cylindrical marine element having an ultra-smooth substantially

cylindrical sleeve surrounding the marine element with a K/D roughness parameter of 1.0×10^{-4} or less where:

B/ K is an average measured surface peak to trough peak distance; and

D is an effective outside diameter of the cylindrical element including the cylindrical sleeve.
